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LEXMARK INTERNATIONAL, INC. INTELLECTUAL PROPERTY LAW DEPARTMENT 740 WEST NEW CIRCLE ROAD BLDG. 082-1 LEXINGTON, KY 40550-0999			RASHID, DAVID	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)
	10/763,129	THAKUR, KHAGESHWAR
	Examiner	Art Unit
	David P. Rashid	2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 24 September 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10, 13-18 and 20-23 is/are rejected.
- 7) Claim(s) 11, 12 and 19 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 24 September 2007 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/12/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

All of the examiner's suggestions presented herein below have been assumed for examination purposes, unless otherwise noted.

Amendments

1. This office action is responsive to the claim and specification amendment received on 9/24/2007. **Claims 1 – 23** remain pending.

Drawings

2. The replacement drawings were received on 9/24/2007 and are acceptable. In response to applicant's drawing amendments and remarks, the previous drawing objections are withdrawn.

Specification

3. In response to applicant's specification amendments and remarks received on 9/24/2007, the previous specification objections are withdrawn.

Claim Objections

4. In response to applicant's claim objections amendments and remarks received on 9/24/2007, the previous claim objections are withdrawn.

Claim Rejections - 35 USC § 112

4. In response to applicant's claim 35 USC § 112 rejection remarks received on 9/24/2007, the previous claim 35 USC § 112 rejections are withdrawn.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. **Claims 1 – 4, 13 – 16, and 22 - 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Scherl et al. (US 4,411,015 A).**

Regarding **claim 1**, Scherl discloses a method of classifying (Col. 1, lines 40 – 44; FIG.

1) an image (FIG. 1, element D), the method comprising:

obtaining an image (Col. 2, lines 19 – 24; FIG. 1, elements D, V, A/D, D);

determining one or more classification thresholds (“*t*” in Col. 3, lines 30 – 32);

determining the concentration ratio (“*K*” in Col. 3, lines 16 - 28) for the image;

comparing the concentration ratio to at least one of the one or more classification thresholds (“less than” and “greater than or equal” in Col. 3, lines 33 - 36); and

classifying the image (“image area” and “text area” in Col. 3, lines 33 - 36) based on the comparison of the concentration ratio to at least one of the one or more classification thresholds.

Regarding **claim 2**, Scherl discloses the method as claimed in claim 1 wherein determining the concentration ratio (“K” in Col. 3, lines 16 - 28) for the image (Col. 2, lines 19 – 24; FIG. 1, elements D, V, A/D, D) includes determining the luminance components of pixels (“brightness” in Col. 3, lines 16 – 28 wherein luminance is used in the video industry to characterize the brightness of displays) in the image.

Regarding **claim 3**, Scherl discloses the method as claimed in claim 1 wherein determining the concentration ratio (“K” in Col. 3, lines 16 - 28) for the image (Col. 2, lines 19 – 24; FIG. 1, elements D, V, A/D, D) includes determining the grayscale components (“grayscale value” in Col. 3, lines 16 - 28) of the image.

Regarding **claim 4**, Scherl discloses the method as claimed in claim 1 wherein determining the concentration ratio (“K” in Col. 3, lines 16 - 28) for the image (Col. 2, lines 19 – 24; FIG. 1, elements D, V, A/D, D) includes generating a histogram (FIG. 2; FIG. 3; “histograms” in Col. 3, lines 12 - 16) for the image.

Regarding **claim 13**, claim 1 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 13. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 13.

Regarding **claim 14**, claim 2 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 14. Thus, references/arguments equivalent to those presented above for claim 2 are equally applicable to claim 14.

Regarding **claim 15**, claim 3 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 15. Thus, references/arguments equivalent to those presented above for claim 3 are equally applicable to claim 15.

Regarding **claim 16**, claim 4 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 16. Thus, references/arguments equivalent to those presented above for claim 4 are equally applicable to claim 16.

Regarding **claim 22**, claim 1 recites identical features as in the image processing system (FIG. 1) of claim 22. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 22.

Regarding **claim 23**, claim 1 recites identical features as in the computer-readable medium containing instructions (Col. 2, lines 28 – 31; FIG. 1, elements S, R wherein the computer R needs instructions to perform the actions cited in Col. 2, lines 28 – 31) for processing an image (FIG. 1, element D) of claim 23. Thus, references/arguments equivalent to those presented above for claim 1 are equally applicable to claim 23.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 5 - 10 and 17 - 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scherl et al. (US 4,411,015 A) in view of Hartmann et al. (US 2002/0067857 A1).

Regarding **claim 5**, while Scherl discloses the method as claimed in claim 1, Scherl does not teach wherein determining one or more classification thresholds includes a training process.

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches determining one or more classification thresholds (FIG. 7, element 860; “one or more predetermined classification parameters” in paragraph [0120]) by including a training process (paragraph [0068], FIG. 7; “The classification determination uses a trained model.” in paragraph [0120]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for determining the one or classification thresholds of Scherl to include a training process as taught by Hartmann as “[t]he method classifies the training images from at least one operating parameter 840, yielding overall accuracy.”, Hartmann, paragraph [0068] and “...to improve the accuracy of the classification of the second group of images.”, Hartmann, paragraph [0120].

Regarding **claim 6**, while Scherl in view of Hartmann disclose the method as claimed in claim 5, Scherl in view of Hartmann do not teach wherein the training process includes analyzing a set of images having known classifications.

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches wherein a training process (paragraph [0068], FIG. 7; “The classification determination uses a trained model.” in paragraph [0120]) includes analyzing a set of images having known classifications (“known classification” in paragraph [0120]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for determining the one or classification thresholds of Scherl wherein a training

process includes analyzing a set of images having known classifications as taught by Hartmann “...to improve the accuracy of the classification of the second group of images.”, Hartmann, paragraph [0120].

Regarding **claim 7**, while Scherl in view of Hartmann disclose the method as claimed in claim 6, Scherl in view of Hartmann do not disclose wherein analyzing a set of images having known classifications includes determining a concentration ratio for each image in the set of images.

Scherl discloses wherein analyzing images (“video” in FIG. 1) includes determining a concentration ratio (“K” in Col. 3, lines 16 - 28) for each image in the set of images.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the set of images having known classifications as taught by Scherl in view of Hartmann to include determining a concentration ratio for each image in the set of images as taught by Scherl “...to provide a method and apparatus for automatic recognition of image and text/graphics areas on a master which automatically separates such different information-containing areas and classified the separated areas properly.”, Scherl, Col. 1, 40 – 44.

Regarding **claim 8**, while Scherl in view of Hartmann in claim 7 disclose the method as claimed in claim 7, Scherl in view of Hartmann do not disclose wherein determining the concentration ratio for each image in the set of images includes generating a histogram for each image.

Scherl discloses wherein determining the concentration ratio (“K” in Col. 3, lines 16 - 28) for each image in the set of images (“video” in FIG. 1) includes generating a histogram (FIG. 2; FIG. 3; “histograms” in Col. 3, lines 12 - 16) for each image.

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the set of images having known classifications and determined concentration ratios as taught by Scherl in view of Hartmann in claim 7 to include generating a histogram of each image as taught by Scherl "...to provide a method and apparatus for automatic recognition of image and text/graphics areas on a master which automatically separates such different information-containing areas and classified the separated areas properly.", Scherl, Col. 1, 40 – 44.

Regarding **claim 9**, while Scherl in view of Hartmann disclose the method as claimed in claim 5, and while Sherl discloses wherein determining one or more classification thresholds ("t" in Col. 3, lines 30 – 32) includes determining a threshold for text images ("t" in Col. 3, lines 30 – 36) and a threshold for other images ("t" in Col. 3, lines 30 – 36), Sherl does not teach wherein the other images are photographic images (since other images do not necessarily include photographic images).

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches classifying photographic images ("digital photos" in paragraph [0036]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the other image group of Scherl to be photographic images as taught by Hartmann so that "[t]he class of natural images encompasses all images taken from nature.", Hartmann, paragraph [0036].

Regarding **claim 10**, while Scherl in view of Hartmann disclose the method as claimed in claim 5, and while Scherl discloses wherein classifying the image based on the comparison of the

concentration ratio to at least one of the one or more classification thresholds is performed according to the following:

If ($CR < T$), then image type = text (Col. 3, lines 33 – 36 such that the inequality is negated)

If ($T \leq CR < P$), then image type = graphic

If ($P \leq CR$), then image type = other image (Col. 3, lines 33 – 36 such that the inequality is negated)

where CR is a concentration ratio (“K” in Col. 3, lines 16 - 28) of the image, T is a threshold for text images (“t” in Col. 3, lines 30 – 36) and P is a threshold for photographic images (“t” in Col. 3, lines 30 – 36), Scherl does not teach wherein the other images are photographic images (since other images do not necessarily include photographic images).

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches classifying photographic images (“digital photos” in paragraph [0036]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the other image group of Scherl to be photographic images as taught by Hartmann so that “[t]he class of natural images encompasses all images taken from nature.”, Hartmann, paragraph [0036].

It must be noted that the negation of the inequalities in Col. 3, lines 33 – 36 of Scherl are then equivalent to those of the examined application. Since variable K of Scherl (concentration ratio CR) is between 0 and 1, the negation could either be [1] the simple result of inversion of K ($1/K$) or [2] the subtraction of K from 1 ($1 - K$). It is shown that without mathematical negation, Scherl achieves the same result as the examined application in that either

above/below the threshold in comparison to the concentration ratio gives a text image, and that the opposite will be the other image (photographic image as further taught by Hartmann).

Regarding **claim 17**, while Scherl discloses an image classifying processor as claimed in claim 13 and while Scherl discloses wherein the processor includes a memory (FIG. 1, element S) and the memory includes (The only memory disclosed in Scherl is element S, thus the thresholds for the text and photographic images must be in element S.) a threshold for text images (“t” in Col. 3, lines 30 – 36), and threshold for other images (“t” in Col. 3, lines 30 – 36), Scherl does not teach wherein the other images are photographic images (since other images do not necessarily include photographic images).

Hartmann discloses a system and method for classification of images and videos (FIG. 1) that teaches classifying photographic images (“digital photos” in paragraph [0036]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the other image group of Scherl to be photographic images as taught by Hartmann so that “[t]he class of natural images encompasses all images taken from nature.”, Hartmann, paragraph [0036].

Regarding **claim 18**, claim 10 recites identical features as in the image classifying processor (FIG. 1, element R) of claim 18. Thus, references/arguments equivalent to those presented above for claim 10 are equally applicable to claim 18.

9. **Claims 20 and 21** are rejected under 35 U.S.C. 102(b) as being anticipated by Poggio et al. (US 5,642,431 A) in view of Scherl et al. (US 4,411,015 A).

Regarding **claim 20**, while Poggio discloses a method of processing an image (FIG. 1), the method comprising:

capturing an image (FIG. 1, element 102) of an object (FIG. 1, element 101);
classifying the image (FIG. 1, element 106) in a class (Col. 3, lines 29 – 34 wherein the class is images with the a face detected) using a threshold (a threshold must exist for the image classifier 106 to detect the presence of the face);
using the class to modify the operation (FIG. 3, element 106; “neural network” in Col. 6, lines 40 – 47) of an image capturing device (FIG. 1, element 100 including elements 102 and 106); and
applying controlled, equalization (FIG. 4, element 405) to an image generated by the image capture device (FIG. 4, element 401) where the controlled, histogram equalization uses (the controlled, histogram equalization step 405 uses the concentration ratio in that the obtained sample face patterns of step 401 used the concentration ratio to determine that they were in face images with detected faces) a threshold, Poggio does not teach wherein the threshold is a concentration ratio.

Scherl discloses a method for automatic recognition of image and text/graphics areas on a master wherein the threshold used is a concentration ratio (“K” in Col. 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the threshold of Poggio to include the concentration ratio as taught by Scherl “to provide a method and apparatus for automatic recognition of image and text/graphics areas on a master which automatically separates such different information-containing areas and classifies the separated areas properly.”, Scherl, Col. 1, lines 40 – 43.

Regarding **claim 21**, while Poggio discloses an image processing system (FIG. 1) comprising:

an image capture device (FIG. 1, element 102);
an image classifier (FIG. 1, element 106) coupled to the image capture device in a feedback loop (FIG. 3, element 106; “neural network” in Col. 6, lines 40 – 47); and a controlled, equalization (FIG. 4, element 405) processor (FIG. 1, element 110) coupled to the image capture device that uses a threshold (a threshold must exist for the image classifier 106 to detect the presence of the face), Poggio does not teach wherein the threshold is a concentration ratio.

Scherl discloses a method for automatic recognition of image and text/graphics areas on a master wherein the threshold used is a concentration ratio (“K” in Col. 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the threshold of Poggio to include the concentration ratio as taught by Scherl “to provide a method and apparatus for automatic recognition of image and text/graphics areas on a master which automatically separates such different information-containing areas and classifies the separated areas properly.”, Scherl, Col. 1, lines 40 – 43.

Allowable Subject Matter

10. **Claims 11, 12 and 19** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding **claims 11, 12, and 19**, while the prior art teaches determining a concentration ratio for an image, the prior art does not teach wherein determining the concentration ratio for the image includes determining the concentration ratio according to the following

$$CR = \left(\sum_L P_L \right)^n / \left(\sum_L P_L^n \right)$$

where CR is a concentration ratio, n is greater than 1, and P_L is a population at a level L.

Response to Arguments

11. Applicant's arguments filed on 9/24/2007 with respect to **claims 1 – 10, 13 – 18 and 21 – 23** have been respectfully and fully considered, though they are not found persuasive.

12. **Summary of Remarks regarding claim 1:**

Applicant argues that the Applicant's specification at paragraph 0036, page 6 clearly defines a concentration ratio as "a number that indicates how concentrated or widespread the population of elements is, such as, for example, how wide spread the distribution of a histogram is." Accordingly, Scherl does not disclose the use of the concentration ratio (CR) as recited in claim 1 in discrimination between image and text/graphic areas. Accordingly, for at least the reasons set forth above, it is respectfully submitted that claim 1 is not anticipated by Scherl under 35 USC § 102(b), and is allowable in its present form (@ response page 13).

13. **Examiner's Response regarding claim 1:**

Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. *Toro Co. v. White Consolidated Industries Inc.*, 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a "lexicographic vacuum, but in the context of the specification and drawings."). Any special meaning assigned to a term "must be sufficiently clear in the specification that any departure from common

usage would be so understood by a person of experience in the field of the invention.” Multiform Desiccants Inc. v. Medzam Ltd., 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998). See also MPEP § 2111.01.

MPEP 2106 II.

The Applicant’s “explicit definition” of the term concentration ratio (CR) is “a number that indicates how concentrated or widespread the population of elements is, such as, for example, how wide spread the distribution of a histogram is.” in paragraph 0036, page 6 of Applicant’s specification.

However, the variable and value “K” of Scherl is within the scope of Applicant’s explicit definition of CR, and “[t]he value K is then utilized for discrimination between image and text/graphic areas.” (Scherl, Col. 3, lines 29 – 30). K is essentially the summation of all values within the brightest grayscale value and the product of the brightest grayscale value and the fraction 4/5, that is then divided by the overall number of samplings. A typical and non-unique example will be given to show why K indicates how concentrated or widespread the population of elements (grayscale values) is.

Suppose a distribution such as FIG. 2 or FIG. 3 of Scherl is inputted into value K. Next suppose the maximum value (i_{max}) is a grayscale value of 160, S will then be the value $(0.8)(160) = 128$. The summation will add the number of values between 128 and 160, suppose 6 sampled pixels had a value of 128, 8 sampled pixels had a value of 129, ..., 1 sampled pixel had a value of 160. The summation would then be $6+8+\dots+1$, which is divided by the total number of pixels sampled N. $6+8+\dots+1$ number close to N will give a fraction close to 1, indicating the presence of a more widespread population of elements (grayscale values) between the grayscale values of $(0.8)(i_{max})$ and (i_{max}) in the histogram. K near the value of one would guarantee a widespread distribution of grayscale values between these two numbers (and thus directly deducing a

histogram like FIG. 3 of Scherl), and a K near the value of zero would guarantee a small distribution of grayscale values between these two numbers (and thus directly deducing a histogram like FIG. 2 of Scherl). Subtracting the value K from one will also give how widespread the population of elements between the grayscale values of (0.8)(i_{max}) and zero in the histogram.

The above characteristics of histograms for text-/graphics and image areas is employed in the inventive apparatus and method for the discrimination of such areas. To that end, the maximum occurring brightness value i_{max} is determined in a first step. The percentage of very bright components in the "window" is calculated according to the equation

$$K = \frac{\sum_{i=S}^{i_{max}} h(i)}{N}$$

wherein i_{max} equals the brightest occurring grayscale value, S equals 0.8 i_{max}, N equals the overall number of samplings, i equals the index for the brightness of the grayscale value, and h(i) equals the number of grayscale values with the brightness i in the "window."

The value K is then utilized for discrimination between image and text/graphics areas. The derived values K are compared to a decision threshold value t. In a sample embodiment of the invention, t is empirically selected at 0.4. In those cases in which K is less than t, the "window" is classified as an image area. In those cases in which K is greater than or equal to t, the "window" is classified as a text area.

The calculations given above clearly show why K of Scherl is within the scope of the explicit definition of CR of the examined application. It is affirmed that claim 1 is anticipated by Scherl under 35 USC § 102(b), and is not allowable in its present form for at least the reasons given above.

Claims 2 – 4, 14 – 16, 22 – 23 are also anticipated by Scherl under 35 USC § 102(b), and is not allowable in its present form for at least the reasons given above.

14. Summary of Remarks regarding claims 5 – 10 and 17 – 18:

The claims in question depend from base claims 1 and 13, and are believed allowable in their present form, since Hartmann does not overcome the deficiencies of Scherl. (*@ response pages 15 - 16*).

15. Examiner's Response regarding claims 5 – 10 and 17 – 18:

It has been shown above Scherl anticipates claims 1 and 13. Claims 5 – 10 and 17 – 18 are not allowable in their present form as Hartmann does not need to overcome the CR deficiencies of Scherl since Scherl has no deficiencies.

16. Applicant's arguments filed on 9/24/2007 with respect to claim 20 have been respectfully and fully considered, and found persuasive.

17. Summary of Remarks regarding claim 20:

Applicant argues that the Applicant's specification at paragraph 0036, page 6 clearly defines a concentration ratio as "a number that indicates how concentrated or widespread the population of elements is, such as, for example, how wide spread the distribution of a histogram is." Accordingly, Scherl does not disclose the use of the concentration ratio (CR) as recited in claim 20 in discrimination between image and text/graphic areas (*@ response page 15*).

18. Examiner's Response regarding claim 20:

Applicant's arguments with respect to claims 20 have been considered but are moot in view of the new ground of rejection.

Double Patenting

19. In response to applicant's double patenting remarks received on 9/24/2007, the previous double patenting rejection is withdrawn.

Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David P. Rashid whose telephone number is (571) 270-1578.

The examiner can normally be reached Monday - Friday 8:30 - 17:00 ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vikkram Bali can be reached on (571) 272-7415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/David P. Rashid/
Examiner, Art Unit 2624

David P Rashid
Examiner
Art Unit 2624



VIKKRAM BALI
PRIMARY EXAMINER